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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,241	11/15/2001	Ulrich Bley	(10111227)	9275

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EXAMINER

PIASCIK, SUSAN L

ART UNIT	PAPER NUMBER
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3643

DATE MAILED: 02/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/001,241

Applicant(s)

BLEY ET AL.

Examiner

Susan L Piascik

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 5** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "said outlet chamber" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Rink et al ('867).

In regards to **claim 10**, Rink et al. teach fuel for use in a gas chamber comprising nitrous oxide and at least one organic substance (see column 10, lines 59-67).

Regarding **claim 11**, Rink et al. teach a fuel wherein the organic substance is selected from the group consisting of polyethylene, starch and paraffin (see column 11, lines 39-50).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rink et al. ('720) in view of Anacker et al.

In regards to **claim 1**, Rink et al. teach a gas generator comprising an inner (24) and an outer (12) tube arranged concentrically one in the other. The inner tube (24) forms a combustion chamber, containing fuel and being closed with a cover plate (16) and an end plate (14). An igniter tube (27) extends through the combustion chamber and joins the cover plate (16) to the end plate (14). An ignition element is disposed in the cover plate (16). The ignition element has

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an outlet opening (58) for the ignition gases in communication with the igniter tube (27). A longitudinal piston (34 – see column 5, lines 49-50) is disposed in the igniter tube (27). The igniter tube (27) has radial openings (72) leading into the combustion chamber. Rink et al. fail to disclose the igniter tube joined in the end plate to an outlet. However, Anacker et al. teach a similar gas generator comprising an igniter tube (34) having a cover plate (30) and an end plate (40). The igniter tube is joined in the end plate to an outlet (49). Therefore, one having ordinary skill in the art at the time of the invention would have found it obvious to modify the gas generator of Rink et al. to include an outlet in the end plate, as taught by Anacker et al., as an alternate means of releasing the gas from the igniter tube

Regarding **claim 2**, Rink et al, as modified by Anacker et al., disclose a gas generator wherein a discharge chamber (13-Anacker et al.) is disposed in the end plate (40-Anacker et al.). The outlet of the igniter tube (34 – Anacker et al.) opens into the discharge chamber (13-Anacker et al.). The discharge chamber (13-Anacker et al.) is connected through blowout openings (39 – Anacker et al.) to an afterburning chamber (11- Anacker et al.) disposed between the outer (10 – Anacker et al.) and inner (34 – Anacker et al.) tubes.

In regards to **claim 3**, Rink et al, as modified by Anacker et al., teach a gas generator wherein the piston (33 – Anacker et al.) is joined to the cover plate (30- Anacker et al.) with a break-away edge (35 – Anacker et al.).

Regarding **claim 4**, Rink et al., as modified by Anacker et al., disclose a gas generator wherein an area for receiving the piston (33 – Anacker et al.) is disposed in the discharge chamber (13 – Anacker et al.) behind the discharge openings in the direction of flow. See Anacker et al. Figure 10.

In regards to **claim 5**, Rink et al, as modified by Anacker et al., teach a gas generator wherein the number of radial openings in the igniter tube increase towards the outlet. See Rink et al. column 4, lines 35-44. See Figure 1 of Anacker et al.

Regarding **claim 6**, Rink et al, as modified by Anacker et al., disclose a gas generator wherein discharge openings (40) are disposed in the outer tube (12).

In regards to **claim 7**, Rink et al, as modified by Anacker et al., teach a gas generator wherein the discharge openings and blow-out holes are closed by a membrane. See Rink et al. column 3, lines 25-29.

Regarding **claim 8**, Rink et al, as modified by Anacker et al., teach a gas generator wherein after the ignition of the ignition element the piston tears open the blow-out openings. See Rink et al. column 6, lines 39-56.

In regards to **claim 9**, Rink et al, as modified by Anacker et al., teach a gas generator further comprising cooling elements disposed in the afterburning chamber. See Rink et al. column 3, lines 1-10.

### ***Citation of Relevant Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to further show the state of art with respect to gas generators:

U.S. Pat. No. 3,948,540 to Meacham

U.S. Pat. No. 5,022,674 to Frantom et al.

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U.S. Pat. No. 5,411,290 to Chan et al.

U.S. Pat. No. 5,462,307 to Webber et al.

U.S. Pat. No. 5,582,426 to O'Loughlin et al.

U.S. Pat. No. 5,653,463 to Jeong

U.S. Pat. No. 5,695,215 to Headley et al.

U.S. Pat. No. 6,007,097 to Rink et al.

U.S. Pat. No. 6,068,292 to Renz

U.S. Pat. No. 6,170,867 to Rink et al.

U.S. Reissued Pat. No. 37,843 to Blumenthal et al.

U.S. Pat. No. 6,481,357 to Lindner et al.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan L Piascik whose telephone number is (703)305-0299. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (703)308-2574. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-7687 for regular communications and (703)305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-7687.

slp  
February 10, 2003

  
PETER M. POON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600